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<table border="0" style="width: 100%;"> <tr> <td style="width: 30%;">(72) Creators of the invention</td> <td>G. A. Kiselev, O. I. Lebedov, T. v. Kovaleva, and R. F. Kolushchinskaya</td> </tr> <tr> <td>(71) Applicant</td> <td>Kalinin Order-of-the-Red-Banner-of-Labor State Medical Institute, Omsk</td> </tr> </table>			(72) Creators of the invention	G. A. Kiselev, O. I. Lebedov, T. v. Kovaleva, and R. F. Kolushchinskaya	(71) Applicant	Kalinin Order-of-the-Red-Banner-of-Labor State Medical Institute, Omsk
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**(54) A DEVICE FOR DRUG ELECTROPHORESIS
IN OCULAR TISSUE**

The invention at hand is related to the field of medical hardware, or more precisely to devices for the performance of physical therapy, and can be used in ophthalmology.

A device for drug electrophoresis already exists that contains a platinum needle electrode, to the working surface of which a wad of cotton wool is fastened [1].

However, this device does not preclude random movements of the eyeball, which leads to the breaking of contact between the electrode and the pathological focus, thereby resulting in a deleterious influence on tissue soundness.

A device also already exists that contains a blepharostatic attachment, which is equipped with a drug pan, and an electrode [2].

However, when this device is used, the drugs affect not only the pathologically altered ocular tissues, but the healthy tissues of the eye as well, thereby leading to the deterioration of the latter's structure.

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The purpose of the invention at hand consists of exerting a local influence on a pathological focus.

This stated objective is achieved by virtue of the fact that the subject device for drug electrophoresis in ocular tissue, which contains a blepharostatic attachment equipped with a drug pan, as well as an electrode, is equipped with a bracket that is positioned on the wall of the aforementioned pan so as to facilitate rotation, while the electrode is mounted on the bracket so as to facilitate movement in the vertical plane. Here, the blepharostatic attachment consists of a flexible suction cup.

The cross-section of the subject device for drug electrophoresis is schematically depicted in the ensuing illustration.

This device contains a blepharostatic attachment in the form of a flexible suction cup, 1, with a drug pan, 2, and an electrode, 3, that is mounted on a bracket, 4, so as to facilitate movement in the vertical plane. The bracket, 4, is positioned in a recess, 5, on the wall of the pan, 2, so as to facilitate rotation.

The cavity of the suction cup, 1, is connected to a flexible bulb, 6.

The device at hand is used in the following manner.

Following general local installation anesthesia (using a 0.25-0.5% solution of tetracaine hydrochloride), the blepharostatic attachment is placed over the patient's eyelids. An absorbent pad, wetted with a drug (depending upon the etiology and nature of the disorder) and having dimensions that match the pathological focus, is applied to the damaged area of the cornea or is positioned in the projection of the focus of the iris and an active electrode, 3, is brought into contact with this pad, which is achieved by means of moving the electrode in the frontal and sagittal planes. Suction is then created within the suction cup using the flexible bulb, 6, thereby ensuring the stability of the position of the device as a whole on the eyeball.

The design of the subject device makes it possible to create immobile contact between the active electrode and the pathological focus, thereby precluding the breaking of this contact during random eye movements, avoiding the attendance of medical personnel over the entire course of the electrophoresis session, reducing drug consumption by 20-25 times, enhancing the effectiveness of treatment, and decreasing the treatment time frame to 6-10 days depending upon the etiology and nature of the disorder.

Patent Claims

The device at hand for drug electrophoresis in ocular tissue, which contains a blepharostatic attachment with a drug pan, as well as an electrode, is distinctive in that, for the purpose of exerting a local influence on a pathological focus, it is equipped with a bracket that is positioned on the wall of the cup so as to facilitate rotation, while the electrode is mounted on the bracket so as to facilitate movement in the vertical plane. Here, the blepharostatic attachment consists of a flexible suction cup.

Sources of Information Taken Into Account During the Expert Evaluation

1. USSR Inventor's Certificate No. 651805, Cl. A 61 F 9/00, 1977.
2. USSR Inventor's Certificate No. 591886, Cl. A 61 F 9/00, 1976.

[insert illustration]

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